

This program aggregates the Micro-grids based on the algorithm described in the BCPM2 Model documentation. For each group of aggregated Micro-grids, a record with a Wire-Center-unique aggregate grid ID and the aggregated values are output to the *aaAGG* table. Additionally, each Micro-grid is tagged with the aggregate grid ID.

Step 26: Calculate Feeder Information for Aggregate Grids

Program: DOS C-Program **B2WCFDR**

Tables/Files Used/Affected: **basepath\aa\aaWCSWS**, switches for state wire centers
basepath\aa\aaAGG, aggregate grids

Tables/Files Produced: **basepath\aa\aaFNFO**, feeder information

This program calculates the feeder lengths and FDI code for each aggregate grid. The table *aaFNFO* contains main feeder-angle information for each wire center that is necessary for creating MapInfo maps for the feeders.

Step 27: Calculate (and Replace With where Appropriate) Alternate Feeder Routes

Program: DOS C-Program **B2WCFD2**

Tables/Files Used/Affected: **basepath\aa\aaWCSWS**, switches for state wire centers
basepath\aa\aaAGG, aggregate grids
basepath\aa\aaFNFO, feeder information

This program calculates the feeder lengths on an unsplit cardinal direction basis and, if this alternate feeder routing is shorter than the previous, substitutes it in the *aaFNFO* table.

Step 28: Generate the Primary Output CSV File

Program: MapBasic **B2OUTCSV**

Tables/Files Used/Affected: **basepath\aa\aaAGG**, aggregate grids

Tables/Files Produced: **basepath\aa\aaOUT.CSV**, primary comma-separated variables file
basepath\aa\aaOUTZ.CSV, empty records of the above file

This program sorts the AGG table into FDI Code within Switch CLLI. It generates the CSV file, creating where necessary a special record to reflect the split of a main feeder at 10,000 feet.

Step 29: Generate the Wire Center Terrain Information

Program: DOS C-Program **B2WCTRN**

Tables/Files Used/Affected: **basepath\aa\aaWCGR**, micro-grids

Tables/Files Produced: **basepath\aa\aaWCTRN**, summarized terrain table

This program summarizes the terrain data from the microgrids of a WC service area. Its two command-line arguments are *StateAbbr* and *BasePath*.

Step 30: Generate the Wire Center Terrain Output CSV

Program: MapBasic **B2TRNCSV**

Tables/Files Used/Affected: **basepath\aa\aaWCTR**N, summarized terrain table

Tables/Files Produced: **basepath\aa\aaWCTR**N.CSV, comma-separated variables file

This program generates the record for each switch, in switch CLI order, summarizing the terrain characteristics of the service area.

Step 31: Generate the Wire Center Info CSV File

Program: MapBasic **B2INFCSV**

Tables/Files Used/Affected: **basepath\aa\aaWC**SW, switches in wire centers

basepath\TELCOS, all telephone companies' file

Tables/Files Produced: **basepath\aa\aaWC**INF.CSV, comma-separated variables file

This program generates the record for each switch, in switch CLI order, summarizing the ownership characteristics of the service area.

Postlude:

We ZIP the two files **aaOUT**.CSV and **aaOUTZ**.CSV into **aaOUT**.ZIP. We ZIP the two files **aaWCTR**N.CSV and **aaWC**INF.CSV into **aaWC**.ZIP. We then FTP these to the INDETEC FTP site.

APPENDIX B

BCPM 3.0 GRID AGGREGATION: GENERAL RULES

Terminology:

The following terms are used in the grid aggregation rules:

Grid	=	1/25 degree Latitude/Longitude Grid
1/4Grid	=	1/50 degree Latitude/Longitude Grid
1/16Grid	=	1/100 degree Latitude/Longitude Grid
1/64Grid	=	1/200 degree Latitude/Longitude Grid

General Rules

If any grid has <1000 Household Units (HU) then output;

Of remaining data,

If any 1/64 grid > 400 HU then do:

If Grid - 1/64 grid < 400 HU then Output Grid;

Else If 1/4Grid - 1/64 grid < 400 HU then Output 1/4Grid;

Else If 1/16 Grid - 1/64 grid < 400 HU then Output 1/16Grid;

Else Output 1/64Grids (all 4);

Of remaining data

If any 1/16 grid > 400 HU then do:

If Grid - 1/16 grid < 400 HU then Output Grid;

Else If 1/4Grid - 1/16 grid < 400 HU then Output 1/4Grid;

Else Output 1/16Grids (remaining 4);

Of remaining data

If any 1/4 grid > 400 HU then do:

If Grid - 1/4 grid < 400 HU then Output Grid;

Else Output 1/4Grids (Remaining 4);

Clean up

If any record has < 100 then Merge with horizontal or vertical similar Grid of equal or larger size to which the road centroid leans.

Partial grids less than 1/5 of a large grid will be aggregated back in (as long as line count is less than 100) to the grid along the longest edge.

APPENDIX B**BCPM 3.0 GRID AGGREGATION:
GENERAL RULES****Terminology:**

The following terms are used in the grid aggregation rules:

Grid	=	1/25 degree Latitude/Longitude Grid
1/4Grid	=	1/50 degree Latitude/Longitude Grid
1/16Grid	=	1/100 degree Latitude/Longitude Grid
1/64Grid	=	1/200 degree Latitude/Longitude Grid

General Rules

If any grid has <1000 Household Units (HU) then output;

Of remaining data,

If any 1/64 grid > 400 HU then do:

If Grid - 1/64 grid < 400 HU then Output Grid;

Else If 1/4Grid - 1/64 grid < 400 HU then Output 1/4Grid;

Else If 1/16 Grid - 1/64 grid < 400 HU then Output 1/16Grid;

Else Output 1/64Grids (all 4);

Of remaining data

If any 1/16 grid > 400 HU then do:

If Grid - 1/16 grid < 400 HU then Output Grid;

Else If 1/4Grid - 1/16 grid < 400 HU then Output 1/4Grid;

Else Output 1/16Grids (remaining 4);

Of remaining data

If any 1/4 grid > 400 HU then do:

If Grid - 1/4 grid < 400 HU then Output Grid;

Else Output 1/4Grids (Remaining 4);

Clean up

If any record has < 100 then Merge with horizontal or vertical similar Grid of equal or larger size to which the road centroid leans.

Partial grids less than 1/5 of a large grid will be aggregated back in (as long as line count is less than 100) to the grid along the longest edge.



Benchmark Cost Proxy Model Release 3.0

Model Inputs

December 11, 1997 Edition

**Developed by
BellSouth, *INDETEC* International,
Sprint and U S WEST**

Preface

The intent of this document is to discuss the definition, value, source and rationale for the individual inputs for BCPM 3.0. This edition includes information on the switching module inputs. Descriptions of inputs associated with the other modules contained in BCPM 3.0 is under development and will be included in future edition of Model Inputs.

A more general discussion of the inputs for the other modules of BCPM 3.0 can be found in the BCPM 3.0 Model Methodology.

SWITCH MODEL INPUTS

Contents

1	State Default Table	9
1.1	State	9
1.1.1	Definition	9
1.1.2	Typical Input Value	9
1.1.3	Source	9
1.1.4	Rationale	9
1.2	ARMIS Percent Local Calls	9
1.2.1	Definition	9
1.2.2	Typical Input Value	9
1.2.3	Source	9
1.2.4	Rationale	10
1.3	ARMIS Percent Toll Calls	10
1.3.1	Definition	10
1.3.2	Typical Input Value	10
1.3.3	Source	10
1.3.4	Rationale	10
1.4	ARMIS Percent Residence Lines	10
1.4.1	Definition	10
1.4.2	Typical Input Value	10
1.4.3	Source	10
1.4.4	Rationale	11
1.5	Percent Business Lines	11
1.5.1	Definition	11
1.5.2	Typical Input Value	11
1.5.3	Source	11
1.5.4	Rationale	11
1.6	Default Engineered Calls per Line	11
1.6.1	Definition	11
1.6.2	Default Input Value	11
1.6.3	Source	12
1.6.4	Rationale	12
1.7	Default Engineered CCS per Line	12
1.7.1	Definition	12
1.7.2	Default Input Value	12
1.7.3	Source	12
1.7.4	Rationale	12
1.8	Number of Busy Hour Local/EAS Calls per Residence Line (Optional)	13
1.8.1	Definition	13
1.8.2	Suggested Input Value	13
1.8.3	Source	13
1.8.4	Rationale	13
1.9	Number of Busy Hour Local/EAS Calls per Business Line (Optional)	13
1.9.1	Definition	13
1.9.2	Suggested Input Value	13

1.9.3	Source	13
1.9.4	Rationale	14
1.10	Number of Busy Hour Toll Calls per Residence Line (Optional)	14
1.10.1	Definition	14
1.10.2	Suggested Input Value	14
1.10.3	Source	14
1.10.4	Rationale	14
1.11	Number of Busy Hour Toll Calls per Business Line (Optional)	14
1.11.1	Definition	14
1.11.2	Suggested Input Value	14
1.11.3	Source	15
1.11.4	Rationale	15
1.12	Number of Local/EAS Minutes per Call per Residence Line (Optional)	15
1.12.1	Definition	15
1.12.2	Suggested Input Value	15
1.12.3	Source	15
1.12.4	Rationale	15
1.13	Number of Local/EAS Minutes per Call per Business Line (Optional)	15
1.13.1	Definition	15
1.13.2	Suggested Input Value	16
1.13.3	Source	16
1.13.4	Rationale	16
1.14	Number of Toll Minutes per Call per Residence Line (Optional)	16
1.14.1	Definition	16
1.14.2	Suggested Input Value	16
1.14.3	Source	16
1.14.4	Rationale	16
1.15	Number of Toll Minutes per Call per Business Line (Optional)	17
1.15.1	Definition	17
1.15.2	Suggested Input Value	17
1.15.3	Source	17
1.15.4	Rationale	17
1.16	Land Loading	17
1.16.1	Definition	17
1.16.2	Default Input Value	17
1.16.3	Source	17
1.16.4	Rationale	18
1.17	Building Loading	18
1.17.1	Definition	18
1.17.2	Default Input Value	18
1.17.3	Source	18
1.17.4	Rationale	18
1.18	Telco E&I Factor	18
1.18.1	Definition	18
1.18.2	Default Input Value	18
1.18.2	Source	19
1.18.3	Rationale	19
1.19	Common Equipment & Power Factor	19

1.19.1	Definition	19
1.19.2	Default Input Value	19
1.19.2	Source	19
1.19.3	Rationale	19
1.20	Percent of Local Calls that are Interoffice	20
1.20.1	Definition	20
1.20.2	Default Input Value	20
1.20.3	Source	20
1.20.4	Rationale	20
1.21	Average Busy Season Busy Hour CCS per Trunk	20
1.21.1	Definition	20
1.21.2	Default Input Value	20
1.21.3	Source	20
1.21.4	Rationale	20
1.22	Portion of SS7 Usage Attributable to Basic Calling	21
1.22.1	Definition	21
1.22.2	Default Input Value	21
1.22.3	Source	21
1.22.4	Rationale	21
1.23	Line to Trunk Ratio	21
1.23.1	Definition	21
1.23.2	Default Input Value	21
1.23.3	Source	21
1.23.4	Rationale	21
1.24	Switch Percent Line Fill	22
1.24.1	Definition	22
1.24.2	Default Input Value	22
1.24.3	Source	22
1.24.4	Rationale	22
1.25	Lucent 5ESS Market Share	22
1.25.1	Definition	22
1.25.2	Default Input Value	22
1.25.3	Source	22
1.25.4	Rationale	22
1.26	Nortel DMS-100 Market Share	23
1.26.1	Definition	23
1.26.2	Default Input Value	23
1.26.3	Source	23
1.26.4	Rationale	23
1.27	Call Completion Fraction	23
1.27.1	Definition	23
1.27.2	Default Input Value	23
1.27.3	Source	23
1.27.4	Rationale	23
1.28	Reserve CCS Inv. Per Line: 5ESS Host/Standalone (Optional)	24
1.28.1	Definition	24
1.28.2	Default Input Value	24
1.28.3	Source	24

1.28.4	Rationale	24
1.29	Reserve CCS Inv. Per Line: 5ESS Remote (Optional)	24
1.29.1	Definition	24
1.29.2	Default Input Value	24
1.29.3	Source	25
1.29.4	Rationale	25
1.30	Reserve CCS Inv. Per Line: DMS Host/Standalone (Optional)	25
1.30.1	Definition	25
1.30.2	Default Input Value	25
1.30.3	Source	25
1.30.4	Rationale	25
1.31	Reserve CCS Inv. Per Line ñ DMS Remote (Optional)	26
1.31.1	Definition	26
1.31.2	Default Input Value	26
1.31.3	Source	26
1.31.4	Rationale	26
2	Switch-Specific Data Table	26
2.1	CLLI	26
2.1.1	Definition	26
2.1.2	Typical Input Value: "ALBSALMADS0"	27
2.1.3	Source	27
2.2	Switch Type	27
2.2.1	Definition	27
2.2.2	Typical Input Values: "5EH", "5ER", "DMSH", "DMSR".	27
2.2.3	Source	27
2.3	Busy Hour Calls per Line	27
2.3.1	Definition	27
2.3.2	Typical Input Value: 2.5	27
2.3.3	Source	27
2.3.4	Rationale	27
2.4	Busy Hour CCS per Line	27
2.4.1	Definition	27
2.4.2	Typical Input Value: 3.6	28
2.4.3	Source	28
2.4.4	Rationale	28
2.5	Lines per Trunk	28
2.5.1	Definition	28
2.5.2	Typical Input Value: 14	28
2.5.3	Source	28
2.6	Percent Fill	28
2.6.1	Definition	28
2.6.2	Typical Input Value: 88%	28
2.6.3	Source	28
3	Global Inputs	29
3.1	SS7 SSP Investment: 5ESS	29
3.1.1.1	Definition	29

3.1.1.2	Default Input Value	29
3.1.1.3	Source	29
3.1.1.4	Rationale	29
3.2	SS7 SSP Investment: DMS	29
3.3.1.1	Definition	29
3.3.1.2	Default Input Value	29
3.1.1.3	Source	29
3.1.1.4	Rationale	29
3.3	Switch Discounts: 5ESS	30
3.3.1	New Switch Discount	30
3.3.1.1	Definition	30
3.3.1.2	Default Input Value	30
3.3.1.3	Source	30
3.3.2	Growth Discount Rate	30
3.3.2.1	Definition	30
3.3.2.2	Default Input Value	30
3.3.2.3	Source	30
3.3.3	Percent of Lines New	30
3.3.3.1	Definition	30
3.3.3.2	Default Input Value	30
3.3.3.3	Source	30
3.3.4	MDF & Protector Discount Rate	31
3.3.4.1	Definition	31
3.3.4.2	Default Input Value	31
3.3.4.3	Source	31
3.4	Switch Discounts: DMS	31
3.4.1	New Switch Discount	31
3.4.1.1	Definition	31
3.4.1.2	Default Input Value	31
3.4.1.3	Source	31
3.4.2	Growth Discount Rate	31
3.4.2.1	Definition	31
3.4.2.2	Default Input Value	31
3.4.2.3	Source	31
3.4.3	Percent of Lines New	32
3.4.3.1	Definition	32
3.4.3.2	Default Input Value	32
3.4.3.3	Source	32
3.4.4	MDF & Protector Discount Rate	32
3.4.4.1	Definition	32
3.4.4.2	Default Input Value	32
3.4.4.3	Source	32
3.5	Portion of Line Protector and MDF Attributable to USF	32
3.5.1	Definition	32
3.5.2	Default Input Value	32
3.5.3	Source	32
3.5.4	Rationale	33
3.6	Portion of Line Port Attributable to USF	33
3.6.1	Definition	33
3.6.2	Default Input Value	33
3.6.3	Source	33

3.6.4	Rationale	33
3.7	"Heavy Business" Feature Loading Multiplier	33
3.7.1	Definition	33
3.7.2	Default Input Value	33
3.7.3	Source	33
3.7.4	Rationale	34
3.8	Minimum Feature Loading Multiplier	34
3.8.1	Definition	34
3.8.2	Default Input Value	34
3.8.3	Source	34
3.8.4	Rationale	34
3.9	Business Penetration Ratio	34
3.9.1	Definition	34
3.9.2	Default Input Value	34
3.9.3	Source	34
3.9.4	Rationale	35
3.10	Maximum Lines per Switch	35
3.10.1	Definition	35
3.10.2	Default Input Value	35
3.10.3	Source	35
3.10.4	Rationale	35
3.11	Maximum Busy Hour Call Attempts per Switch	35
3.11.1	Definition	35
3.11.2	Default Input Value	35
3.11.3	Source	35
3.11.4	Rationale	36
3.12	Maximum Busy Hour CCS per Switch	36
3.12.1	Definition	36
3.12.2	Default Input Value	36
3.12.3	Source	36
3.12.4	Rationale	36
3.13	Discount Adjustment Factors	36
3.13.1	Definition	36
3.13.2	Default Values	36
3.13.3	Source	36
3.13.4	Rationale	37
4	Regression Coefficient Table	37
4.1.1	Description	37
4.1.2	Default Values	37
4.1.3	Source	38
5	External Investment Table	38
6	SCIS Investment Table	38
7	SCM Investment Table	38

1 State Default Table

This table contains inputs that can reasonably be made specific to the state and company level. The input values supplied with BCPM 3.0 represent what the sponsors consider to be reasonable representative values for these inputs. The defaults are provided for the convenience of users who may not have access to more specific data. Some are based upon observations and the judgement of BCPM subject matter experts. The BCPM Sponsors do not represent the provided values as necessarily appropriate for every potential serving area. Many of the inputs have a wide range of valid values. We recommend that the user replace these values with state and company specific inputs whenever available. Several of these inputs are state defaults to be used when CLLI-specific data has not been provided via the Switch-Specific Data Table.

1.1 State

1.1.1 Definition

The state to which the inputs pertain.

1.1.2 Typical Input Value

Not Applicable.

1.1.3 Source

Postal abbreviations for states and territories.

1.1.4 Rationale

Allows data to be provided on a state-specific basis.

1.2 ARMIS Percent Local Calls

1.2.1 Definition

Percent of calls that are local (intra-switch and inter-switch). Includes Extended Area Service (EAS) calling.

1.2.2 Typical Input Value

ARMIS Percent Local Calls
81.5%

1.2.3 Source

Derived from ARMIS Report 43-08, Number of Local Calls / Total Calls. The values supplied with BCPM are state-specific.

1.2.4 Rationale

The percent local calls is used along with a number of local calls per line to develop an engineered number of calls per line for use in switch investment estimation. This typical value represents the average of all states.

1.3 ARMIS Percent Toll Calls

1.3.1 Definition

Percent of calls that are IntraLATA and InterLATA toll.

1.3.2 Typical Input Value

ARMIS Percent Toll Calls
18.5%

1.3.3 Source

Derived from ARMIS Report 43-08, (Number of IntraLATA toll calls plus InterLATA toll calls) / Total Calls. The values supplied with BCPM are state-specific.

1.3.4 Rationale

The percent toll calls is used along with a number of toll calls per line to develop an engineered number of calls per line for use in switch investment estimation. This typical value represents the average of all states.

1.4 ARMIS Percent Residence Lines

1.4.1 Definition

This is the percentage of switched local exchange lines that are residential.

1.4.2 Typical Input Value

Percent Residence Lines
67.4%

1.4.3 Source

Derived from ARMIS 43-08 results. The values supplied with BCPM are state-specific.

1.4.4 Rationale

This input is used to develop the engineered busy hour calls and CCS per line when the user opts to develop those parameters from direct input of calls and minutes. It is also used to develop customer calling characteristics that are used to determine the percent of usage investment that is attributable to USF. This typical value represents the average of all states.

1.5 Percent Business Lines

1.5.1 Definition

This is the percentage of switched local exchange lines that are business (single- and multi-line).

1.5.2 Typical Input Value

Percent Business Lines
32.6%

1.5.3 Source

Derived from ARMIS 43-08 results. The values supplied with BCPM are state-specific.

1.5.4 Rationale

This input is used to develop the engineered busy hour calls and CCS per line when the user opts to develop those parameters from direct input of calls and minutes. It is also used to develop customer calling characteristics that are used to determine the percent of usage investment that is attributable to USF. This typical value represents the average of all states.

1.6 Default Engineered Calls per Line

1.6.1 Definition

This is the number of Busy Hour calls per line used to engineer switches. This input is used to estimate total switch investments if the user opts not to develop this value by inputting assumptions about the number of calls and minutes per line. If the user has provided CLLI-specific inputs via the User Data table, then those will be used instead of this default.

1.6.2 Default Input Value

Default Engineered Calls per Line
2.5

1.6.3 Source

This input should be obtained from switch engineering experts for the company under study, if possible. The default input value represents the judgement and experience of BCPM sponsor company subject matter experts.

1.6.4 Rationale

This input was chosen to be consistent with the engineering data used to price switches and as input to Audited LEC Switch Models (ALSMs). A round number was selected to protect the confidentiality of the actual data. Typically, switches are engineered to a single traffic input such as this, rather than discrete estimates of residential and business usage.

1.7 Default Engineered CCS per Line

1.7.1 Definition

This is the number of Busy Hour CCS per line used to engineer switches. This input is used to estimate total switch investments if the user opts not to develop this value by inputting assumptions about the number of calls and minutes per line. If the user has provided CLLI-specific inputs via the User Data table, then those will be used instead of this default.

1.7.2 Default Input Value

Default Engineered CCS per Line
3.6

1.7.3 Source

This input should be obtained from switch engineering experts for the company under study, if possible. This input represents the judgement and experience of BCPM sponsor company subject matter experts.

1.7.4 Rationale

This input was chosen to be consistent with the engineering data used to price switches and as input to Audited LEC Switch Models (ALSMs). A round number was selected to protect the confidentiality of the actual data. Typically, switches are engineered to a single traffic input such as this, rather than discrete estimates of residential and business usage.

1.8 Number of Busy Hour Local/EAS Calls per Residence Line (Optional)

1.8.1 Definition

This is the number of Busy Hour residence calls per line (Local and Extended Area Service) to be designated as Universal Service usage. This input is used to determine the portion of total usage investment attributable to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.8.2 Suggested Input Value

Number of Busy Hour Local/EAS Calls per Residence Line
2.0

1.8.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.6.

1.8.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.9 Number of Busy Hour Local/EAS Calls per Business Line (Optional)

1.9.1 Definition

This is the number of Busy Hour business calls per line (Local and Extended Area Service) to be designated as Universal Service usage. This input is used to determine the portion of total usage investment attributable to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.9.2 Suggested Input Value

Number of Busy Hour Local/EAS Calls per Business Line
2.0

1.9.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be

used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.6.

1.9.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.10 Number of Busy Hour Toll Calls per Residence Line (Optional)

1.10.1 Definition

This is the number of Busy Hour residence calls per line (IntraLATA Toll and InterLATA Toll). This input is used to determine the portion of total usage investment attributable to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.10.2 Suggested Input Value

Number of Busy Hour Toll Calls per Residence Line
0.5

1.10.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.6.

1.10.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.11 Number of Busy Hour Toll Calls per Business Line (Optional)

1.11.1 Definition

This is the number of Busy Hour business calls per line (IntraLATA Toll and InterLATA Toll). This input is used to determine the portion of total usage investment attributable to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.11.2 Suggested Input Value

Number of Busy Hour Toll Calls per Business Line

0.5

1.11.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.6.

1.11.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.12 Number of Local/EAS Minutes per Call per Residence Line (Optional)

1.12.1 Definition

This is the number of Minutes per residence call (Local and Extended Area Service). This input is used to determine the portion of total usage investment attributable to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.12.2 Suggested Input Value

Number of Local/EAS Minutes per Call per Residence Line

2.5

1.12.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.7.

1.12.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.13 Number of Local/EAS Minutes per Call per Business Line (Optional)

1.13.1 Definition

This is the number of Busy Hour Minutes per business call (Local and Extended Area Service). This input is used to determine the portion of total usage investment attributable

to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.13.2 Suggested Input Value

Number of Local/EAS Minutes per Call per Business Line
2.5

1.13.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.7.

1.13.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.14 Number of Toll Minutes per Call per Residence Line (Optional)

1.14.1 Definition

This is the number of Busy Hour Minutes per residence call (InterLATA Toll and IntraLATA Toll). This input is used to determine the portion of total usage investment attributable to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.14.2 Suggested Input Value

Number of Toll Minutes per Call per Residence Line
2.5

1.14.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.7.

1.14.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.15 Number of Toll Minutes per Call per Business Line (Optional)

1.15.1 Definition

This is the number of Busy Hour Minutes per business call (InterLATA Toll and IntraLATA Toll). This input is used to determine the portion of total usage investment attributable to Universal Service and to estimate the total office switching investment when the user opts to use this input method.

1.15.2 Suggested Input Value

Number of Toll Minutes per Call per Business Line
2.5

1.15.3 Source

We recommend that the user request wire-center specific studies to obtain this data if possible. Telco engineering departments may have switch engineering data that could be used. The value supplied here was chosen to be consistent with the engineering data supplied for input 1.7.

1.15.4 Rationale

The BCPM Sponsors believe that engineering data provides the most reliable source for this input.

1.16 Land Loading

1.16.1 Definition

The ratio of land investment to central office investment.

1.16.2 Default Input Value

Land Loading
0.0117

1.16.3 Source

The land ratio is based upon the 1995 ARMIS values of Land divided by the sum of COE (Switching, Operator and Transmission).

1.16.4 Rationale

Application of this ratio produces an investment in land needed to place the central office.
The investment function is:

$$\text{Land investment} = \text{Land Loading} * \text{Switch Investment}$$

1.17 Building Loading

1.17.1 Definition

The ratio of building investment to central office investment.

1.17.2 Default Input Value

Building Loading
0.0738

1.17.3 Source

The Building factor was based upon a LEC Industry data request (the actual data value was a land and building factor, the ARMIS land factor was subtracted to arrive at the building factor).

1.17.4 Rationale

Application of this ratio produces an investment in land needed to place the central office.
The investment function is:

$$\text{Building investment} = \text{Building Loading} * \text{Switch Investment}$$

1.18 Telco E&I Factor

1.18.1 Definition

The ratio of telephone company capitalized engineering and installation dollars to switch investment dollars.

1.18.2 Default Input Value

Telco E&I Factor
0.0577

1.18.2 Source

The default input is taken from BCPM 1.1. We strongly recommend that users develop inputs specific to the local company under study. Data for this calculation should be available from the accounting records of the company.

1.18.3 Rationale

The Telco E&I factor is needed to calculate the investment for telephone company capitalized engineering expenses. The investment function is:

$$\text{Telco E\&I Investment} = \text{Telco E\&I Loading} * \text{Vendor EF\&I Switch Investment}$$

1.19 Common Equipment & Power Factor

1.19.1 Definition

The ratio of central office common equipment and powerplant investment to switch dollars.

1.19.2 Default Input Value

Common Equipment & Power Factor
0.0682

1.19.2 Source

The default input is taken from BCPM 1.1. We strongly recommend that users develop inputs specific to the local company under study. Data for this calculation should be available from the accounting records of the company.

1.19.3 Rationale

The CE&P factor is needed to calculate the investment for telephone company capitalized engineering expenses. The investment function is:

$$\text{CE\&P Investment} = \text{CE\&P Loading} * \text{EF\&I Switch Investment}$$